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Inside Wallops

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Atmospheric Wave Linked to Sea Ice Flow Near Greenland

A NASA researcher has found that the amount of sea ice that moves between Greenland and Spitsbergen, a group of islands north of Norway, is dependent upon a "wave" of atmospheric pressure at sea level. By being able to estimate how much sea ice is exported through this region, called Fram Strait, scientists may develop further insights into how the ice impacts global climate.

This export of sea ice helps control the thermohaline circulation, a deep water ocean conveyor belt that moves warm, salty water poleward and cold, fresh water toward the equator. The thermohaline circulation is one of the primary mechanisms that maintains the global heat balance.

Don Cavalieri, a researcher at NASA's Goddard Space Flight Center, Greenbelt, discovered a link between the transport of sea ice through this region and the position or phase of the longest sea level pressure wave circling the Earth at polar latitudes.



The Fram Strait

NASA Photo

Until now, scientists have had inconsistent results when trying to identify the mechanism behind this transport of sea ice. The North Atlantic Oscillation, in particular, was unable to explain the changes in sea ice transport through Fram Strait.

"The significance of this work is the connection between the phase of the longest atmospheric wave called 'wave 1' in sea level pressure and long-term Arctic Ocean and sea ice variability," said Cavalieri.

Sea level pressure is made up of high and low pressure systems as any weather map will show. The large-scale semi-permanent highs and lows define the longest pressure waves, which are

called planetary waves because they extend thousands of miles and circle the world. The longest wave, called wave 1, is made up of one ridge (high pressure) and one trough (low pressure). It turns out that wave 1 is the dominant pattern at polar latitudes. Because these planetary waves are so dominant in wintertime atmospheric circulation their amplitudes (strength) and phases (position) provide useful information on large-scale wind patterns and thus on sea ice transport.

The Icelandic Low is the primary weather system in the North Atlantic. At times this low pressure system extends northeastward into the Barents Sea. When this happens a secondary low pressure system may develop in the Barents Sea region. It is the counterclockwise circulation around this secondary low pressure system in the Barents Sea that drives sea ice through the Fram Strait. Whenever this secondary low pressure system exists, wave 1 shifts eastward and is said to be in its eastward phase, as opposed to a westward phase.

When wave 1 is in its westward mode, the Icelandic Low is more intense and localized, no longer extending to the Barents Sea. Because of the position of the Low relative to the Strait, the winds are more westerly and less ice is forced southward through Fram Strait.

For more information, please see:
<http://www.gsfc.nasa.gov/topstory/20020807seaice.html>

Wallops Shorts.....

In the news

SpaceFlight Now

"NASA Scientific Balloon Sets World Record"

Florida Today

"NASA Balloon Sets Record"

WESR Radio

"NASA Balloon Sets World Record"

Eastern Shore News

"September Events at the NASA Visitor Center"

CNN

"Record-Setting Balloon Skirts Edge of Space"

Eastern Shore News

"NASA Scientific Balloon Sets World Record"

The Daily Times

"Area Students Spend Summer Working at NASA Facility"

Aviation Week – Aug. 28

"NASA Flies Record-Setting Scientific Balloon Aug. 25"

Aviation Week – Aug. 29

"NASA's Ultra Long Duration Balloon to Try Again to Circumnavigate Globe"

America Live

Radio Broadcast (Washington State)

Beach cleanup is September 14
Call x1584 to volunteer



A Message to the Wallops Community from John Campbell

The Wallops Senior Staff in conjunction with the Equal Opportunity Advisory Committee (EOAC) on Minorities and Persons with Disabilities is pleased to announce the first Wallops American Heritage Week Celebration!

Through the efforts of the EOAC and other Wallops Volunteers, a great variety of activities are planned for the week of October 7, 2002. We elected to consolidate many of the national monthly and weekly observances into a single week of activities to make it easy for every one to participate.

We will kickoff our activities on Monday morning, October 7, with morning coffee. During the week, there will be exhibits, speakers, entertainers, workshops, contests, food and product vendors, and other fun stuff. Our week of celebration will conclude on Thursday, October 10, with the popular International Luncheon.

Mark your calendars!! More details will follow through e-mail, flyers, and bulletin boards. Please join in the festivities and fun.

**Armed Security Protection
at the Wallops Flight
Facility**

As part of the ongoing efforts to assure employee safety and security at the Wallops Flight Facility (WFF), security officers have been armed with handguns.

This increased level of security is necessary for the Federal Government and NASA’s post-Sept. 11, 2001, security requirements. These measures also make WFF consistent with the level of security at all other NASA Centers.

Planning for armed security protection for WFF has taken place over the past year, and all officers are now well trained to high standards.

Significantly higher personnel standards, training and certification requirements were placed on the Wallops Institutional Consolidated Contract (WICC) that is responsible for security for NASA and the Navy. These higher standards include several features for safe and effective armed security protection.

All security officers have been trained and certified by the Virginia Department of Criminal Justice Services in the use of force protocols and handgun use and safety.

Background investigations of all security personnel have been completed by the Commonwealth of Virginia and by the U.S. Government.

The implementation of armed security officers at the Main Base and Wallops Island gates and roving patrols in security vehicles and in buildings will take place gradually throughout September.

Your continued support and cooperation with security officers as they protect and serve all WFF employees is greatly appreciated.

**Wallops Morale Activities
Committee Invite you to.....**

**a Pig Pickin’ Party at 5 p.m.
September 20**

**At the Wallops
Pavilion**



A cash bar opens at 4:35 p.m. Wallops in-house chefs will be serving BBQ pork on a bun, cole slaw, baked beans and dessert.

Tickets are \$10 per person and are available at the Wallops Exchange, Building E-2.

Sympathy is extended to the family and friends of
Hartwell Taylor
who died August 26 in
Richmond, VA. Taylor retired from
NASA Wallops Flight Facility in
1997 as head of the Electrical
Systems Group. He is survived
by his wife, Nellie, two daughters
and four grandchildren.

**Accelerated Leadership
Program**

The Accelerated Leadership Program (ALP) seeks to fill the gap in GSFC’s leadership development programs for individuals who have reached their full performance level (FPL) in a journey level, non-supervisory position (GS-12 or GS-13), and who are not yet ready or eligible for the majority of leadership and management development programs available.

Applications for the ALP will be accepted through September 18.

All interested persons may contact GSFC Career Counselors Michelle McCarthy or Cheryl Palmer on x66-5794 for assistance with developing their applications and preparing for interviews.

More information about this program along with the application form is available at the following website, <http://grizzly.gsfc.nasa.gov/hr/index.htm>. You may also contact ALP Program Manager, Sheri Brown on x66-2374 or Mark Goldman on 66-8852.



Public Seminar

The Virginia Institute of Marine Science, in collaboration with the Citizens for a Better Eastern Shore, will present the next in a series of public seminars on natural resource ecological issues.

“One if by land, two if by sea: global dispersal of organisms by ship,” will be presented at 7:30 p.m., September 11, at the Virginia Institute of Marine Science, Wachapreague.

The guest speaker is Dr. Lisa Drake from the Ocean, Earth and Atmospheric Sciences Department of Old Dominion University.

For further information call 757 787-5816.

Aircraft Office Moves

Aircraft operations will now be conducted from the Building D-1 Hangar. Physical barriers have been placed to control ramp access with a single entry/exit point on the west side of the hangar.

All other access to the D-1 and the N-159 ramps will be by permission of the Wallops Control Tower personnel.

Before attempting to access to the D-1 and N-159 ramps, coordination should be made with the Tower on x1688. Use caution when entering the ramp area and give way to aircraft operations.

Prior to entering the D-1 hangar with any vehicle, permission should be received from Maintenance Control on x1882. For supply deliveries contact Aircraft Supply on x1535.

The taxiway adjacent to the west side of Building D-1 is an active taxiway and security will be notified of unauthorized incursions.

State Fair Coupons

Save \$5 on the \$17.99 ticket price at the Virginia State Fair with coupons that are available at the Wallops Exchange, Credit Union and from the Public Affairs Office.

The State Fair runs September 26 to October 6 and is located at the Richmond Raceway Complex, Richmond, Va.

For information and schedules of events taking place visit the Virginia State Fair web site: www.statefair.com

House for Rent

Pocomoke, 101 Brentwood Cr. 4 bedrooms, 2.5 baths, 2 car garage, no pets, \$700/month, \$700 security deposit. Call Ralph Welsh, 301-464-9596

Thank you

I thank each of you for the gift cards to Lowe’s and the Gospel Shop, for the plaque of Wallops activities, and for the signed photograph of the Scout launch. I will certainly put each of these items to good use.

I really had a great career at Wallops and I will miss each of you. Thank you again for remembering me. ...Joe Duke

Inside Wallops is an official publication of Goddard Space Flight Center and is published by the Wallops Office of Public Affairs, Extension 1584, in the interest of Wallops employees. Recent and past issues of *Inside Wallops* also may be found on the NASA Wallops Flight Facility homepage: www.wff.nasa.gov

Editor

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